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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,305	02/22/2002	Carl Tyren	3660-34	8227

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EXAMINER

PREVIL, DANIEL

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 05/23/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,305

Applicant(s)

TYREN, CARL

Examiner

Daniel Previl

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because fig. 1 needs to have a descriptive label. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrott et al. (US 5,821,859) in view of Dames (US 6,144,300).

Regarding claim 10, Schrott teaches the magnetic elements are formed as wires made from an amorphous (abstract); the magnetic elements are arranged at predetermined angles to each other (fig. 6A; col. 6; lines 37-65); at

least one of the magnetic elements has a length, which is different from the length of at least one other magnetic of the tag (fig. 9; col. 8, lines 45-67; col. 9, lines 1-32); at least one of the magnetic elements has a diameter, which is different from the diameter of at least one other magnetic element of the tag (fig. 9; col. 8, lines 45-67; col. 9, lines 1-32).

Schrott discloses every feature of the claimed invention but fails to explicitly disclose the lengths and diameters of the magnetic elements and the angles between them jointly form the identity of the tag.

However, Dames discloses the lengths and diameters of the magnetic elements and the angles between them, jointly form the identity of the tag (size of the tag dependent of the length) (col. 8, lines 13-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Dames in Schrott. Doing so detect accurately the presence of the tag for economical and security purposes.

Regarding claim 11, the above combination discloses all the limitations in claim 1 and Dames further discloses the diameters of the magnetic elements are selected from 90 micron or less (col. 9, lines 41-45).

Regarding claim 12, although, the above combination discloses all the limitations in claim 10 but fails to explicitly teach the lengths of the magnetic elements are selected from a range between 40 and 100 mm. Since Dames teach the lengths of the magnetic elements (col. 15, lines 36-59). So, it would

have been to one of ordinary skill in the art at the time the invention was made to use any length range as desired to detect accurately the presence of the tag for economical and security purposes.

5. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrott in view of Dames and further in view of Tyren (WO 97/29464).

Regarding claim 13, the above combination discloses all the limitations in claim 10 but fails to explicitly disclose magnetic element with a coating of dielectric material, such as glass.

However, Tyren discloses dielectric environment inside a glasstube filled with a liquid (page 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Tyren in Dames. Doing so would detect accurately the presence of the tag for economical and security purposes.

Regarding claim 14, the above combination discloses all the limitations in claim 10 and Tyren further discloses amorphous material with giant magnetoimpedance effect (page 12).

Regarding claim 15, the above combination discloses all the limitations in claim 10 and Tyren further discloses magnetic element has a majority ratio of cobalt (page 11).

Regarding claim 16, the above combination discloses all the limitations in claim 10 and Tyren further discloses ($\text{Fe}_{0.06} \text{Co}_{0.94}$) $72.5\text{Si}12.5\text{B}15$ (page 11).

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schrott in view of Dames.

Regarding claim 17, Schrott discloses a first set of lengths for magnetic elements (fig. 9); providing a second set of diameters for magnetic elements (fig. 9); forming a third set of element types by associating one unique length among first set of lengths and one unique diameter among second set of diameters (fig. 9); providing a fourth set of angular positions for magnetic elements (fig. 6; fig.9); mapping n different values (fig. 2).

Schrott discloses every feature of the claimed invention but fails to explicitly disclose arranging in tag for each word in identity code, a magnetic element of the type corresponding to the value of the word, at one angular position among fourth set of angular positions.

However, Dames discloses arranging in tag for each word in identity code, a magnetic element of the type corresponding to the value of the word, at one angular position among fourth set of angular positions (col. 8, lines 13-24).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Dames in Schrott in order to detect accurately the tag for economical and security purposes.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dames in view of Tyren.

Regarding claim 18, Dames discloses identity of the tag from the angular positions, lengths and diameters of the magnetic elements (fig. 9; col. 8, lines 13-46).

Dames discloses the limitations above but fails to explicitly disclose transmitter means for transmitting a first electromagnetic signal, a receiver means for receiving a second electromagnetic signal, modulating means for generating a magnetic field for modulating the second electromagnetic signal during the generation by the tag; demodulating means for producing a reply signal by demodulating the second electromagnetic signal as received by the receiver means and a controller connected to the demodulating means wherein the modulating means is arranged to generate a magnetic modulating field having a rotating orientation, wherein the controller is arranged to detect when a frequency shift occurs for the reply signal and in response determine of an

individual magnetic element; the modulating means is arranged to generate a magnetic modulating field with increasing amplitude, wherein the controller is arranged to determine a corresponding change in amplitude of the reply signal and in response determine individual magnetic element; the modulating means is arranged to generate a magnetic modulating field with increasing amplitude, wherein the controller is arranged to continuously monitor an amplitude of the reply signal so as to detect a saturation point and in response determine of individual magnetic element.

Tyren discloses transmitter means 11 for transmitting a first electromagnetic signal, a receiver means 12 for receiving a second electromagnetic signal, modulating means for generating a magnetic field for modulating the second electromagnetic signal during the generation by the tag; demodulating means for producing a reply signal by demodulating the second electromagnetic signal as received by the receiver means and a controller connected to the demodulating means wherein the modulating means is arranged to generate a magnetic modulating field having a rotating orientation, wherein the controller is arranged to detect when a frequency shift occurs for the reply signal and in response determine of an individual magnetic element; the modulating means is arranged to generate a magnetic modulating field with increasing amplitude, wherein the controller 14 is arranged to determine a corresponding change in amplitude of the reply signal and in response determine individual magnetic element; the modulating means is arranged to generate a

magnetic modulating field with increasing amplitude, wherein the controller is arranged to continuously monitor an amplitude of the reply signal so as to detect a saturation point and in response determine of individual magnetic element (driving stage 17 comprises means for generating a low-frequency modulating current; modulating current in amplitude as a function of time) (fig. 1; fig. 6-fig. 7; page 7-page 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Tyren in Dames. Doing so would detect accurately the presence of the tag for economical and security purposes.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dames et al. (US 5,420,569) discloses a remotely readable data storage devices and apparatus.

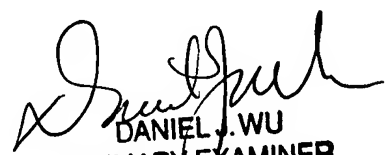
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 703 305-1028. The examiner can normally be reached on Monday-Thursday. the examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel WU can be reached on 703 308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Daniel Previl
Examiner
Art Unit 2632

DP
May 19, 2003


DANIEL J. WU
PRIMARY EXAMINER
5/19/03